OS/390 Dataset Maintenance OS/390 Dataset Maintenance

OS/390 Dataset Maintenance

The dataset maintenance facility allows you to perform functions on the following objects:

• Sequential (PS) and PDS-type (PO) datasets. Available functions include LIST, BROWSE, RENAME, DELETE, COMPRESS, CATALOG/UNCATALOG, and ALLOCATE datasets. You can also display dataset information and access PDS members from a list of datasets.

- GDG-type datasets (Generation Data Groups). These can be handled as any other dataset. When a GDG is allocated, Natural ISPF automatically allocates a model dataset, which appears on the catalog with type GDG-BASE. When the DELETE function is requested for a GDG, both the GDG and its associated files are deleted on confirmation.
- Volumes. You can display information on volumes.

To enter the dataset maintenance facility

• Select the DATASETS option from the Natural ISPF Main Menu.

The Data Sets Entry Panel appears:

You can specify the dataset you wish to maintain in the input fields and enter a function command in the command line. Meaning of the input fields:

Field	Meaning	
Data Set Name	Displays the dataset last used. You can select any other dataset by overtyping this name, or generate a list of datasets on the specified volume by using a combination of strings and wildcard * as described in the subsection Selection Windows and Wildcards in Section Command Logic. See also the subsection Support of HSM.	
Volume	Required only if the dataset is not cataloged. To list volume serial numbers, leave the Data Set Name field blank and use the wildcard * as described above.	
Password	System password if dataset is protected.	
Node	Select Entire System Server node. Enter a question mark? and press Enter to open a window in which all node numbers are scrolled with an ACTIVE or INACTIVE status report. If you do not specify a node, the default node is assumed.	

Function Commands

The available function commands are:

Command	Object Parameter Syntax
ALLOCATE	dataset VOL=n
BROWSE*	dataset VOL=n NODE=id
CATALOG	dataset VOL=n
COMPRESS**	dataset VOL=n NODE=id
COPY	dataset VOL=n NODE=id, object-type object-parameters, REP
DELETE	dataset VOL=n NODE=id
EDIT*	dataset VOL=n NODE=id
EXPORT*	dataset VOL=n NODE=id
EXTENTS	dataset VOL=n NODE=id
INFORMATION	dataset VOL=n NODE=id
LIST	*_* VOL=n NODE=id
PRINT*	dataset VOL=n NODE=id, printer-name CC NO
RENAME	dataset VOL=n NODE=id, new-name
UNCATALOG	dataset VOL=n NODE=id

Note:

- * Apply to sequential datasets only.
- ** Applies to partitioned datasets only.

A full description of these commands, including the function parameters, is contained in Section Command Reference. The object parameters correspond to the input fields on the Data Sets Entry Panel.

Notes:

- 1. If you issue any of the above function commands from outside the dataset facility, you must specify the object-type parameter **D** before the object parameters.
- 2. In the case of multi-volume datasets, only the first volume need be specified in the VOL parameter.

Example: CATALOG

Use the CATALOG command to catalog a dataset. If you issue the CATALOG command and specify a volume serial number using the VOL option, the catalog function is performed without further prompting. If you issue the CATALOG command with only the dataset name, Natural ISPF presents you with the following screen:

```
COMMAND ===>
 Data set Name ===> RW.COMN.SOURCE
                                    ===>
 Volsers ===> ===>
                            ===>
                                              ===>
                    ===>
                            ===>
                                     ===>
                                              ===>
                            ===>
                    ===>
                                     ===>
 Device
           ===>
Press ENTER to catalog, END to cancel
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12-
    HELP SPLIT END SUSPE RFIND RCHAN UP
                                   DOWN SWAP LEFT RIGHT CURSO
```

Type in the volume serial number of the dataset and device type. Press Enter to perform the catalog operation.

Example: ALLOCATE

With the ALLOCATE command, you can allocate a new dataset specified in the dataset name parameter. Natural ISPF provides a special feature here. If you issue the ALLOCATE command for an existing (allocated) dataset, the information for the dataset is displayed in the following format:

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```
----- ALLOCATE DATASET -----
COMMAND ==>
  Data set name ===> MBE.SYSF.ISPF.141.DOC
  VOLume SERial ===> COM811 / / /
or Generic UNIT ===> 3380
    Dataset Organization ===> PO
    Space Units ===> CYL
                                                      (BLK,TRK,CYL)
     Quantity: Primary ===>
                                   Secondary ===>
     Directory Blocks ===> 70
     Record Format
    Record Length
                      ===> 80
                     ===> 3120
     Block Size
                      ===> NO
                                                      (YES,NO)
     Rlse
    Contiguous
                     ===> NO
                                                      (YES,NO)
                                                      (YES,NO)
                     ===> NO
     Round
     Expiration Date ===> Catalog Data Set ===> YES
                                                      ('YYDDD')
                                                      (YES,NO)
     GDG limit ===> More attributes ===>
                                                      (YES,NO)
     Node
                      ===> 148
Press ENTER to allocate
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
     Help Split End Suspe Rfind Rchan Up Down Swap Left Right:s
```

You can type in the name of the dataset to be allocated by overtyping the value in the Data set name field. Modify any other value as required and press Enter to perform the allocation.

The ALLOCATE DATASET screen will also appear if you copy a dataset to a target which does not exist.

Meaning of the fields:

Field	Meaning	
Volume Serial	Serial number of the volume on which the dataset is to be allocated. You can specify up to 5 volumes for multi-volume datasets.	
Generic Unit	If you do not specify a volume, specify the generic identifier from which a volume is to be selected (e.g. 3380).	
Dataset Organ.	For example: PO (PDS), PS (sequential dataset), DA (direct access).	
Space Units	Space type for dataset. Possible values: BLK Blocks TRK Tracks CYL Cylinders	
Primary Qty.	Initial quantity to be allocated.	
Secondary Qty.	Additional quantity to be allocated if dataset fills.	
Directory Blocks	Must be specified for PO-type datasets.	
Record Format	For example: FB (fixed block), VB (variable block), FBA (fixed block ANSI control characters), etc.	
Record Length	Given in bytes.	
Block Size	Given in bytes.	
Rlse	YES specifies that allocated space is released if not used by dataset.	
Contiguous	YES specifies that tracks or cylinders must be adjacent.	
Round	YES specifies that space is automatically rounded up to the nearest cylinder if tracks or blocks are specified as space units.	
Expiration Date	Date the dataset expires. Until this date is reached, each attempt to update or delete the dataset causes a console message, requiring an operator reply.	
Catalog Data Set	YES specifies the dataset is to be automatically cataloged when allocated.	
GDG limit	A value in this field identifies the file to be allocated as GDG. The value specifies the maximum number of Generation Datasets that can be associated with the GDG being defined.	
More attributes	Specify YES to define SMS attributes or more GDG attributes. Another window opens for entering additional data (see example below).	
Node	Entire System Server node number on which the dataset is to be allocated.	

Type in the required values in the input fields and press Enter to allocate the dataset.

When the allocation of a dataset fails and an error message showing a hexadecimal reason code is displayed, you can use the command HELP to display a more meaningful explanation of the error.

Example: ALLOCATE (More attributes)

Specifying YES in the More attributes field of the allocate screen opens the following window:

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```
----- ALLOCATE DATASET -----
COMMAND ==>
   +-----Additional dataset attributes-----+
                     SMS ATTRIBUTES
                                                      !
   ! MANAGEMENT CLASS
! STORAGE CLASS
                     : _____
                                                      !
   ! STORAGE CL.
! DATA CLASS
                                                      ! L)
                                                      !
                     GDG ATTRIBUTES
   ! EMPTY ALL CATALOG ENTRIES, : ____ (YES- all, NO - last only)
   ! WHEN LIMIT REACHED
                      : ____ (YES - deleted, NO - left)
   ! DSCB CLEAR FROM VTOC,
   ! WHEN DSN IS UNCATALOGED
   +----+
    Expiration Date ===> Catalog Data Set ===> YES
    Expiration Date
                                               ('YYDDD')
                                               (YES,NO)
     GDG limit ===> More attributes ===> yes (YES,NO)
    Node
                 ===> 148
Press ENTER to allocate
```

Meaning of the fields:

Field	Meaning
SMS Attributes:	
MANAGEMENT CLASS	The management class to be used for obtaining the data management-related information for SMS (migration, backup and retention criteria) to allocate the dataset.
STORAGE CLASS	The storage class to be used for obtaining the storage-related information for dataset allocation.
DATA CLASS	The data class to be used for obtaining the data-related information (SPACE, LRECL, etc.) for dataset allocation.
GDG Attributes:	
EMPTY ALL CATALOG ENTRIES	When the LIMIT value is reached: YES specifies all Generation Datasets are uncataloged. NO specifies only the the oldest Generation Dataset is uncataloged.
DSCB CLEAR FROM VTOC	When the Generation Dataset is uncataloged (due to DELETE command or EMPTY ALL value): YES specifies the dataset's DSCB is deleted from the VTOC. the GDS no longer exists. NO specifies the dataset's DSCB is not deleted from the VTOC. The DSCB is left in the VTOC and the dataset can be processed as any non-VSAM dataset.

For more information on Generation Data Groups, see the relevant section in the documentation MVS/DFP: Access Method Services for the Integrated Catalog Facility.

Examples: ALLOCATE

• Assuming you have a cataloged dataset named MYFILE, the command:

AL D MYFILE

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displays the information for the MYFILE. Modify the display for the dataset to be allocated.

• If you wish to allocate a new, uncataloged dataset without a model, the command:

```
AL D NEWFILE VOL=com811
```

displays the blank allocation screen for file NEWFILE on volume COM811.

Example: INFORMATION (1)

The following figure is the result of the command:

```
INFORMATION D FHI.SOURCE
```

The fields in the information screen reflect the specification of the allocation parameters described for the ALLOCATE command above, with additional information such as date of last reference, current number of cylinders or tracks and allocated extents, and in the case of PDS libraries, number of members, directory blocks and unused blocks:

```
----- DATA SET INFORMATION ------
COMMAND ===>
   DATA SET NAME : FHI.SOURCE
   GENERAL DATA
     VOLUME SERIAL : ADA004
     DEVICE TYPE
                      3380
                                         CURRENT-ALLOCATION
     ORGANIZATION
                                           ALLOCATED CYLINDERS:
                                                                10
     RECORD FORMAT :
                      FΒ
                                           ALLOCATED EXTENTS :
     RECORD LENGTH :
                      80
                   :
                                         CURRENT UTILIZATION
                      6000
     BLOCK SIZE
                                           PERCENT USED: 37
     ALLOCATION TYPE: CYL
     1ST EXTENT : 10
                              CYL 0 TRK
     SECONDARY
     SECURITY
                   : NONE
                                         PARTITIONED DATA SET
   CREATION DATE : 1993-07-13
                                          NUMBER-OF-MEMBERS :
                                                               51
   LAST-REFERENCE: 1998-09-29
EXPIRATION-DATE: ******
                                           DIRECTORY-BLOCKS :
                                           UNUSED-BLOCKS
Enter-PF1---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
     Help Split End Suspe Rfind Rchan Up
                                             Down Swap Left Right Curso
```

Example: INFORMATION (2)

The following figure is the result of the command:

```
INFORMATION D JWO.SYSF.GDG
```

The fields in the information screen reflect the specification of the allocation parameters for a GDG described for the ALLOCATE command above. Additional information provided by this display is the number of generations with creation date, volume serial number and device series of each Generation Dataset, as well as the assigned name suffix indicating the version number with which as the Generation Datasets appears in a list:

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```
------ DATA SET INFORMATION ------
COMMAND ===>
   GDG NAME
             : JWO.SYSF.GDG
                                GENERATIONS:
                               NUM CREATED VOLSER SERIES NAME-SUFFIX
   GENERAL DATA
    GDG LIMIT NUMBER : 5
                               0 18/02/93 USR8A6 3380 '.G0002V00
    EMPTY ALL FROM CATLG : NO
                                -1 30/11/92 USR8A6 3380 '.G0001V00
      WHEN LIMIT REACHED
     DSCB CLEAR FROM VTOC : NO
      WHEN UNCATALOGED
                  : 93356
     EXPIRATION DATE
   MODEL DSN ATTRIBUTES
    ORGANIZATION : PS
    RECORD FORMAT
                     : VBA
    RECORD LENGTH
                     : 137
    BLOCK SIZE
                     : 9240
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
    Help Split End Suspe Rfind Rchan Up Down Swap Left Right:s
```

The above example shows a GDG with a limit of 5 datasets. If this limit is reached, the oldest dataset is deleted from the catalog, but not from the VTOC. Currently, there are two generations. The attributes of the model dataset are shown at the bottom of the display.

Example: EXTENTS

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The following figure is the result of the command:

```
EXTENTS D MBE.COMN.SOURCE
```

The display shows the dataset name, volume serial number and number of extents, and lists the extents, giving the disk addresses (hexadecimal) and the size (decimal) of each one:

Examples: DELETE

• When deleting a dataset with CONFIRM ON, the confirmation window asks you for a catalog update. The following window opens as the result of the command:

• If you mark the input field with Y, the dataset catalog is updated after the DELETE operation.

If you issue the DELETE command for an empty GDG, the following confirmation window appears. You can specify NO in the appropriate field to retain the model dataset on the disk:

• If you issue the DELETE command for a non-empty GDG, the following confirmation window opens. You can specify the delete parameters as appropriate before the deletion is performed:

```
! Confirm scratching GDG JWO.SYSF.GDG !
! with Y _ _ !
! though GDG DSN's exist (DSN's would also be removed from catalog) !
! Delete also all GDG DSN's from VTOC's YES (YES / NO) !
! Delete also model DSN from catalog volume YES (YES / NO) !
```

Example: Special BROWSE Command

the command:

```
BROWSE DS *
```

lists dataset names for which short IDs are defined (see the subsection Library Definition in Section Profile Maintenance). Select a dataset for display by marking it with any character in the window and pressing Enter.

Example: Special LIST Command

the command:

```
LIST DS *
```

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lists available library short names (see also the subsection Library Definition in Section Profile Maintenance).

Example: LIST Datasets

The following list of datasets is the result of the command:

```
LIST D JWO.SYSF.*
```

```
LIST-DS:JWO.SYSF.* ----- Row 0 of 24 - Columns 052 082
                                                             SCROLL===> CSR
                                                 VOLSER SERIES CLASS TYPE
    DATA SET NAME
  ** ****************************** top of list *********************
                                                 DCN004 3380 DASD NONVSAM
    JWO.SYSF.BLOCKS
    JWO.SYSF.CMEDIT
                                                       3380 DASD CLUSTER
                                                             DASD DATA
    JWO.SYSF.CMEDIT.DATA
                                                 DCN005 3380
    JWO.SYSF.COMPLETE.EDITWORK
                                                 DCN004 3380
                                                             DASD NONVSAM
                                                 DCN004 3380
    JWO.SYSF.EDITW1
                                                              DASD NONVSAM
    JWO.SYSF.FERNUNI
                                                 DCN004 3380
                                                             DASD NONVSAM
    JWO.SYSF.FULL
                                                 DCN004 3380
                                                             DASD NONVSAM
    JWO.SYSF.GDG
                                                       3380 DASD GDG BASE
    JWO.SYSF.GDG.G0001V00
                                                 USR8A6 3380 DASD NONVSAM
    JWO.SYSF.GDG.G0002V00
                                                 USR8A6 3380 DASD NONVSAM
    JWO.SYSF.P0132
                                                 DCN002 3380 DASD NONVSAM
    JWO.SYSF.PO400
                                                 DCN002 3380 DASD NONVSAM
    JWO.SYSF.PO80
                                                 DCN002 3380 DASD NONVSAM
    JWO.SYSF.SMALL
                                                 DCN002 3380 DASD NONVSAM
    JWO.SYSF.SOURCE
                                                 DCN004 3380 DASD NONVSAM
    JWO.SYSF.SPL1
                                                 DCN004 3380
                                                              DASD NONVSAM
    JWO.SYSF.S1
                                                 DCN002 3380
                                                              DASD NONVSAM
    JWO.SYSF.TBLK
                                                 DCN004 3380
                                                              DASD NONVSAM
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
       Help Split End Suspe Rfind Rchan Up
                                            Down Swap Left Right :s
```

The list shows all cataloged datasets on the default node starting with JWO.SYSF. Use the RIGHT command (usually assigned to PF11) to scroll right and display the full TYPE field as in the example above.

Meaning of the data provided for each dataset:

Column	Meaning
VOLSER	Volume serial number
SERIES	Device series
CLASS	Device class. Possible values: COMM Communications CTCA Channel-to-channel adapter DASD Direct access DISP Display station TAPE Tape UREC Unit record
TYPE	Dataset type (for example, NONVSAM, CLUSTER, DATA, GDG BASE).

Example: LIST a VTOC

The following shows an example VTOC generated using the command:

```
LIST D * VOLSER=COM811
```

LIST-DS:*/VOL=COM811	Row-1-of-215-	-column	ns-046	-076
COMMAND===>		SCRO	LL===>	PAGE
DATA SET NAME	DSORG	LRECL	BLKSZ	RCFM
** ****** top of list	******	*****	*****	* * *
SYS1.VTOCIX.COM811	PS	02048	02048	F
ADABAS.COMN.V5.DEP.SOURCE	PO	08000	06000	FB
ADABAS.COMN.V5.DEP.MACLIB	PO	00080	03600	FB
PRD.COMN.NOC111.LOAD	PO	00000	06447	U
ADABAS.COMN.V5.DEP.LOAD	PO	00000	04096	U
UP.COMN.PERS	PS	00068	10000	VB
ADABAS.COMN.V5.LOAD	PO	00000	06447	U
ADABAS.COMN.TELEX	PO	00080	03600	FB
ADL100.COMN.LOAD	PO	06233	19069	U
ALO.COMN.INPL	PS	04624	04628	VB
ADL100.COMN.OUTPUT	PO	00132	05280	FB
ADL100.COMN.UNLOAD	PS	09996	10000	VB
ALO.COMN.SOURCE	PO	00080	03120	FB
ADL100.COMN.LIB	PO	08000	03120	FB
BF.COMN.SOURCE	PO	08000	03120	FB
ALO.COMN.LOAD	PO	00000	19040	U
BMRK.COMN.ADABAS.V513.LOAD	PO	00000	19069	U
AOS.COMN.V112.INPL	PS	04624	04628	VB
Enter-PF1PF2PF3PF4PF5PF6PF7	-PF8PF9PF1	LOPF:	11PF:	12
Help Split End Suspe Rfind Rchan Up	Down Swap Lei	t Rig	ght Cu	rso

The list contains all datasets on volume COM811. You must scroll right to display all the information provided (RIGHT command, usually assigned to PF11).

Meaning of the data provided for each dataset:

Column	Meaning
DSORG	Dataset organization. For example: DA Direct access PO Partitioned dataset (PDS) PS Sequential dataset
LRECL	Logical record length in bytes
BLKSZ	Block size in bytes
RCFM	Record format. For example: F Fixed length record F Fixed blocked record (ANSI control characters) U Unformatted record V Variable blocked record
SIZE CYL/TRK	Size of dataset in cylinders and tracks
% USED	Percentage of dataset used
CREATED	Dataset creation date
LAST-ACC	Date of last access
SMS	SMS-controlled device/unit (YES, NO).
UPD	Has the file been updated since the last backup (YES, NO)?

Example: LIST Volumes

Volumes are separate objects in Natural ISPF, but have no Entry Panel. You can access volume information using the Data Sets Entry Panel, or using a function command that addresses object type VOL.

The following figure illustrates a list of all volumes generated using the command:

LIST VOL *

LIST-VOL:*		I		
COMMAND===>			-	SCROLL===> CSR
UNIT VOLSER				
** ***********	***** t	op of list	******	******
100 BMC003	3380 ONLINE	RESIDENT	64 , 0029	52 , 0000
101 BMC004	3380 ONLINE	RESIDENT	14 , 0031	5 , 0014
102	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
103	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
104	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
105	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
106	3380 OFFLIN	ſΕ	0 , 0000	0 , 0000
107	3380 OFFLIN	ſΕ	0 , 0000	0 , 0000
108	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
109	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
10A	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
10B	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
10C	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
10D	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
10E	3380 OFFLIN	ΙE	0 , 0000	0 , 0000
10F	3380 OFFLIN	ΙE	0 , 0000	·
			27 , 0036	•
			81 , 0167	·
Enter-PF1PF2PF3-			•	·
			Down Swap Left	

You must scroll right to display all the information provided (RIGHT command, usually assigned to PF11).

Meaning of the data according to column heading:

Column	Meaning
UNIT	Unit address
VOLSER	Volume serial number
SERIES	Device series
STATUS	Device status. Possible values: CHANGE Device status is changing. OFFLINE Device is offline. ONLINE Device is online.
MOUNT	Device mount status. Possible values: MOUNT PEND Mount is pending. NOT READY Device not ready. REMOVABLE Device is removable (e.g. a tape). RESERVED Device is reserved. RESIDENT Device is resident (e.g. a hard disc).
FREE(CYL/TRK)	Number of free cylinders / unused tracks
CONTIG (CYL/TRK)	Contiguous cylinders / tracks
CLASS	Device class. Possible values: COMM Communications CTCA Channel-to-channel adapter DASD Direct access DISP Display station TAPE Tape UREC Unit record
SMS	SMS-controlled device/unit (YES, NO).

You can select a volume and list its contents (VTOC) by entering the line command \mathbf{L} in the input field preceding the UNIT notation (see the following subsection).

The line command I (INFORMATION) displays volume information. For details, see the example in the subsection OS/390 System Operations.

Line Commands

When listing datasets, the line commands in the following table are available. When listing volumes, only the ${\bf I}$ and ${\bf L}$ line commands are available.

Line Command	Corresponding Function Command	Remarks
A	ALLOCATE	
В	BROWSE	Sequential datasets only (but see the example of the special BROWSE command).
СМ	COMPRESS	Partitioned datasets only.
СР	COPY	
СТ	CATALOG	
D	DELETE	
Е	EDIT	Sequential datasets only.
ET	EXTENTS	
EX	EXPORT	Sequential datasets only.
I	INFORMATION	
L	LIST	From a list of volumes, lists datasets on a volume; from a list of datasets, lists members of a PDS.
PR	PRINT	Sequential datasets only.
R	RENAME	
U	UNCATALOG	

Line commands can also be used as valid abbreviations for function commands entered in the command line of any screen.

Local Commands

In Edit Mode:

If you display a sequential dataset in Editor format in EDIT mode, you can issue local commands from the Editor command line in addition to Editor commands.

The following local commands are available:

OS/390 Dataset Maintenance In List Mode:

Command	Meaning
IMPORT	Imports a PC file or Con-nect document into the sequential dataset (see the section Useful Features)
PASSWORD <password></password>	If the dataset is password-protected, use this command to enter the valid password in order to update the dataset.

In List Mode:

If you display lists of datasets or volumes, the following local commands are available in addition to Editor scroll commands: ALL, LAYOUT, RELIST and SORT. For detailed information, see the subsections in the section Useful Features.